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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,222	07/25/2003	Michael J. Putnam	PGI6044P0052US	2436

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WOOD, PHILLIPS, KATZ, CLARK & MORTIMER
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CHICAGO, IL 60661

EXAMINER

YAO, SAMCHUAN CUA

ART UNIT PAPER NUMBER

1733

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,222

Applicant(s)

PUTNAM ET AL.

Examiner

Sam Chuan C. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-9 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) 11-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (US 5,414,914) in view of Haid et al (US 5,240,764), Knoke et al (US 5,552,206), and James et al (US 5,822,833) for reasons of record set forth in a prior office action dated 05-03-05, and further in view of Seuhr et al (US 5,670,234) for reasons of record set forth in a prior office action dated 11-08-05.

As for an added limitation of "*said nonwoven fabric being devoid of chemical binder*", a resultant modified non-woven fabric of Suzuki et al is free of any chemical binder, because Suzuki et al does not require using a chemical binder. Therefore, this added limitation does not define over the modified non-woven fabric of Suzuki et al.

3. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over James et al (US 5,822,833) in view of Suzuki et al (US 5,414,914), Haid et al (US 5,240,764), Knoke et al (US 5,552,206), and Seuhr et al (US 5,670,234).

James et al discloses a process of manufacturing a resin-binder free hydroentangled fibrous web. The process comprises providing a fiber web including staple fibers such as rayon fibers, polyester fibers, etc. or a blend

thereof; hydroentangling the fiber web using a 3-D rotary image transfer device to impart 3-D image to the hydroentangled fiber web (col. 5 line 13 to col. 6 line 9; col. 9 line 21 to col. 12 line 28; figures 1A-1C; 9-13).

James et al does not teach subjecting a fiber web to an initial hydroentangling operation to consolidate the web before it is hydroentangled to a 3-D rotary image transfer device. However, it would have been obvious in the art to subject a fiber web to an initial hydroentangling operation to consolidate the web before it is hydroentangled to a 3-D rotary image transfer device, because it is well known in the art to hydroentangle a fiber web before it is subjected to a principal hydroentangling operation, where the web on a rotary support member is exposed to pressurized streams of water as exemplified in the teachings of Suzuki et al (col. 4 line 44 to col. 5 line 40; figure 9) in order to simplify the handling and transport of the web.

James et al does not teach using a blend of thermo-fusible and base fibers in forming a fibrous web and heat-activating the heat-fusible fibers in a hydroentangled web. However, it would have been obvious in the art to form a fibrous web comprising a blend of thermo-fusible and base fibers and heat-activate a hydroentangled web in a modified process of James et al, because: a) Haid et al, drawn to a spunlaced nonwoven web, discloses hydroentangling a web comprising base fibers and thermo-fusible binder fibers and then *"remelting the fusible fibers (i.e., heat setting) ..."* to *"improve durability and abrasion resistance"* (abstract; col. 2 lines 26-31); and, b) Knoke et al teaches *"[a] special*

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softness is attained when the non-woven fabric is bonded using water jets. ... for obtaining an especially high internal strength, thermoplastic binding fibers can be included as well" (col. 2 lines 47-50 and claims 15-16).

As for the jet-dyeing limitation, such would have been obvious in the art as such is conventional in the art of making hydroentangled fabrics as exemplified in the teachings of Seuhr et al (col. 4 lines 22-65; figures 3-4). Seuhr et al teaches that a jet dyeing process *"is a standard dyeing process used on many apparel and home finishing fabrics to soften the fabric and provide uniform color distribution. Such finishing processes are standard in the textile industry ..."* (col. 4 lines 28-36).

With respect to claims 2-4 and 6-9, these claims would have been obvious in the art for essentially the same line of reasoning set forth in a prior office action which was applied in numbered paragraph 2 above.

Response to Arguments

4. Applicant's arguments filed on 03-03-06 have been fully considered but they are not persuasive.

On page 6 full paragraph 1, Counsel argued *"[t]his appears to suggest that for every claim limitation that applicants might add in an effort to advance prosecution, they can expect yet a further prior art reference to be applied ..."*.

Not if the added limitation(s) include(s) a patentable subject matter, thereby rendering the claim as a whole non-obvious to one in the art.

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On page 7 full paragraph 1, Counsel argued “... *Applicants must respectfully maintain that this is contrary to the requirements of M.P.E.P. 2143.01, which specifically admonishes that “the proposed modification cannot render the prior art unsatisfactory for its intended purpose.”* While it is desired in Suzuki et al to produce a hydroentangled web at a low cost, Examiner strongly disagrees with Counsel’s inference that the proposed modification would render the process of Suzuki et al “*unsatisfactory for its intended purpose*”. One in the art would have considered the tradeoff between production cost versus enhanced aesthetic appearance (i.e. using 3-D imaged transfer device and jet dyeing operation) and improve durability (i.e. incorporation fusible fibers into a fiber web). Examiner maintains that there is a reasonable expectation of success to the proposed modification to the process of Suzuki et al.

On page 7 full paragraph 3, Counsel argued Suehr et al contemplates using jet dyeing to soften a fabric. Accordingly, “... such a teaching is contrary to the present invention, wherein applicants’ invention contemplates manufacture of a fabric which is *sufficiently* durable as to *withstand jet dyeing*.” (originally italicized). Simply because jet dyeing soften a fabric, it does not mean that before the fabric is jet dyed, the fabric is not sufficiently durable to be able to withstand a jet dyeing operation. In fact, in light of the similarity of the production processes between the claimed process and the modified process of Suzuki et al, it would be reasonable to expect that the web in a modified process of Suzuki et al would have a similar, if not identical, characteristics to the web of the claimed process.

Moreover, fabric softness and fabric durability are NOT mutually exclusive from each other. In other words, a fabric can have enhance softness and yet durable. On page 7 last 2 lines to page 8 line 4, Counsel argued that *"the prior art must suggest the desirability of the claimed invention"*. Examiner agrees. The collective teachings of the above prior art references would have suggested to one in the art on the desirability of the claimed invention. As Counsel's argument regarding the novelty of the presently claimed invention, the issue here is whether or not the presently claimed invention would have been obvious in the art and NOT whether the claimed invention is novel.

On page 1 full paragraph 1, Counsel argued that *"... Suehr et al does contemplate is fabrics formed with a 20% acrylic binder pick-up, with subsequent drying on drying cans"*. It would appear that Counsel is taking the Suehr et al patent out context. A fabric where a binder is used is merely used as comparative illustration to a fabric formed using a process of Suehr et al. See column 3 line 48 to column 4 line 65. More important, neither Suzuki et al nor James et al (alternative the primary references) contemplates using a binder resin. As for Counsel's argument regarding the meta-physical energies which are needed in Suehr et al, it is unclear where Counsel obtained this teaching. In any event, neither Suzuki et al nor James et al (alternative the primary references) contemplates using such meta-physical energies.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richard Crispino can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

Scy
03-06-06